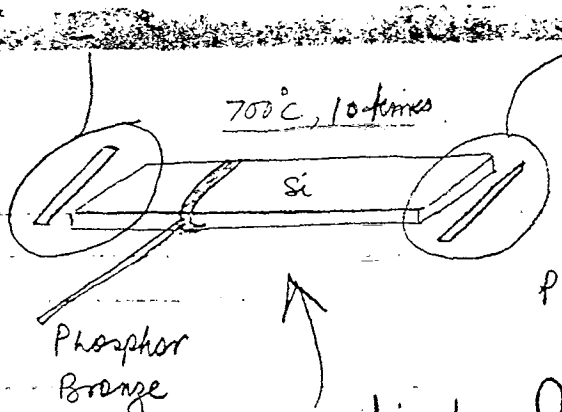
CEEG/DAS
CONV. 07-03-92



← EXPERIMENTAL SET-UP

p-doped silicon

apply heat
(1) ~~bulk~~ heating
OR
(2) micro flame, or
(3) laser beam

$\alpha_{metal} \simeq 10 - 17 \times 10^{-6}/°C$

$\alpha_{silicon} \simeq 2.6 \times 10^{-6}/°C$.

metal (Au)	α_{metal}
silicide	$\alpha_{silicide}$
silicon	$\alpha_{silicon}$

RESULT →

~~steps in process~~
1. placing metallic lead and silicon in intimate surface to surface contact (polished surfaces being pressed together)
2. applying heat

Reality: Bond will see less than 200°C.

The bond is for

CEEG: please consider method claims or producing an ohmic connection to silicon

CONNECTION HAS:
(1) Thermal stability
(2) strength
(3) ohmic contact
(4) can undergo 2000 heating cycles; we can work with that, but will attempt improving cycle life

problem?: 2000 cycles

EWI trying indium - silver diffusion into silicon

indium: accommodates

silicide - [illegible]

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Source: https://www.industrydocuments.ucsf.edu/docs/xflj0000